

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

4540
455N: 10/606,673
A.U.: 3636
Conf. # 6403

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁵ :

B60R 22/10

A1

(11) International Publication Number:

WO 91/12978

(43) International Publication Date:

5 September 1991 (05.09.91)

(21) International Application Number: PCT/US91/01238

(22) International Filing Date: 22 February 1991 (22.02.91)

(30) Priority data:

487,644

2 March 1990 (02.03.90)

US

(71)(72) Applicants and Inventors: REILLY, Robert, J. [US/US];
REILLY, Lisa, G. [US/US]; 47 Merton Street, Brockton,
MA 02402 (US).

(74) Agent: BELLO, Herbert, L.; 57 River Street, Wellesley,
MA 02181 (US).

(81) Designated States: AT (European patent), AU, BE (Euro-
pean patent), CA, CH (European patent), DE (European
patent), DK (European patent), ES (European patent),
FR (European patent), GB (European patent), GR (Eu-
ropean patent), IT (European patent), JP, LU (European
patent), NL (European patent), SE (European patent).

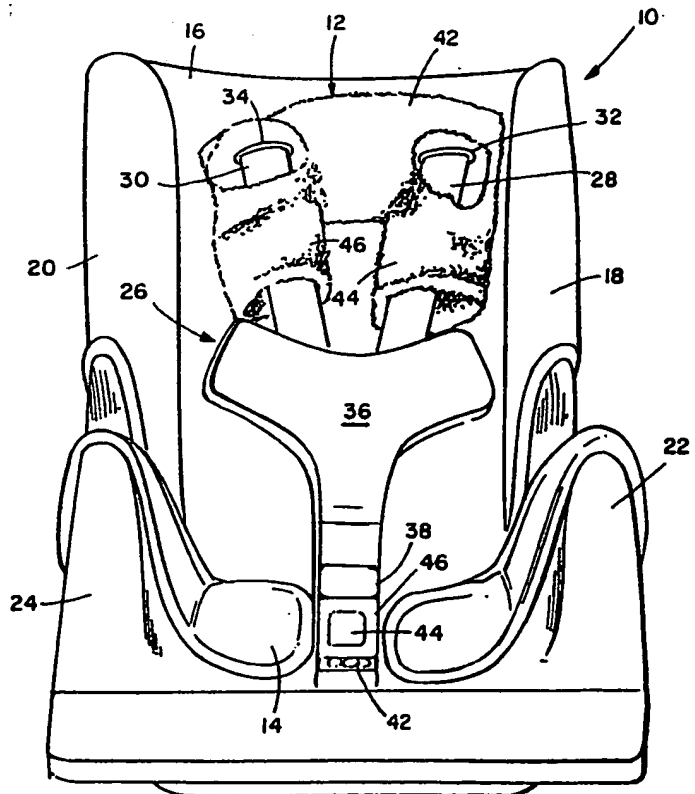
Published

With international search report.

(54) Title: SEAT BELT CUSHIONING DEVICE

(57) Abstract

A one piece cushioning device (12) for a child's car seat (10) has a main body (46) defining a head rest and a pair of extending arms (48, 50) that define a pair of shoulder belt covers. Each arm is sized and shaped to fit around a shoulder (28, 30) of the car seat, closures being provided to secure the arms around the shoulder belts. The main body is positioned between a child's head and the back of the car seat and serves as a cushion to protect against irritation to the child's head and the arms protect against irritation to the child's back.



FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AT	Austria	ES	Spain	MG	Madagascar
AU	Australia	FI	Finland	ML	Mali
BB	Barbados	FR	France	MN	Mongolia
BE	Belgium	GA	Gabon	MR	Mauritania
BF	Burkina Faso	GB	United Kingdom	MW	Malawi
BG	Bulgaria	GN	Guinea	NL	Netherlands
BJ	Benin	GR	Greece	NO	Norway
BR	Brazil	HU	Hungary	PL	Poland
CA	Canada	IT	Italy	RO	Romania
CF	Central African Republic	JP	Japan	SD	Sudan
CG	Congo	KP	Democratic People's Republic of Korea	SE	Sweden
CH	Switzerland	KR	Republic of Korea	SN	Senegal
CI	Côte d'Ivoire	LI	Liechtenstein	SU	Soviet Union
CM	Cameroon	LK	Sri Lanka	TD	Chad
CS	Czechoslovakia	LU	Luxembourg	TC	Togo
DE	Germany	MC	Monaco	US	United States of America
DK	Denmark				

TITLE: SEAT BELT CUSHIONING DEVICE

BACKGROUND OF THE INVENTION

1. Field of Invention:

The present invention relates to car seats for infants and small children and, more particularly, is directed towards a cushioning device for protecting the neck and head of a child in a car seat against irritation.

2. Description of the Prior Art:

Federal law requires use of car seats by infants and children under the age of four. Generally speaking, car seats are primarily designed to meet federal standards of safety, the comfort of the child is a secondary consideration. A variety of protective and decorative devices for car seat belts are shown in prior art patents, for example, U.S. Patent Nos. 3,397,913; 3,957,282; 4,678,205; 4,693,495; 4,741,574; and 4,848,793. Children's car seats suffer from the disadvantage that the shoulder belts rub against the child and cause discomfort. The shoulder belts rub against and irritate the child's neck and shoulder area. Further irritation is caused to the neck and shoulders when the infant or child moves or tries to move while being restrained in the car seat. In such a case, the belts dig into and rub against the sides of

-2-

the neck and shoulders. When the infant or child falls asleep, his/her head and cheeks rub on the top side of the shoulder belt, thus causing further skin irritation. In addition, the back of the child's head may be irritated by rubbing against the back of the car seat or the shoulder belt grommets or bushings in the back of the car seat. A need exists for a seat belt cushioning device which will protect a child against such irritation.

SUMMARY OF THE INVENTION

It is an object of the present invention to provide a one piece cushioning device for an infant's or child's car seat which will prevent the discomfort caused by such car seats.

It is another object of the present invention to provide a one piece cushioning device for use with an infant's or child's car seat which protects the infant or child against irritation caused by rubbing against the shoulder belts.

It is a further object of the present invention to provide a one piece cushioning device for use with an infant's or child's car seat which protects the infant or child from skin irritation of the neck, cheeks and head caused by rubbing against the shoulder belts and back of the car seat.

These and other objects of the invention are achieved by a one piece cushioning device that is composed of a soft material and includes a main body defining a head rest and a pair of extending arms that

define a pair of shoulder belt covers. The main body of the cushioning device rests against the back of the car seat and the extending arms are folded longitudinally and secured about the shoulder belts. Closures are provided on the arms to secure the arms about the shoulder belts, the closures being on the outside edge of the arms when folded about the shoulder belts. When the infant or child is placed in a car seat having the cushioning device installed therein, the infant's or child's head rests against and is protected by the main body of the cushioning device and the extending arms that are wrapped about shoulder belt protect against irritation that would be caused by rubbing of the shoulder belts.

The invention accordingly comprises the devices and systems, together with their parts, elements and interrelationships that are exemplified in the following disclosure, the scope of which will be indicated in the appended claims.

BRIEF DESCRIPTION OF THE DRAWINGS

A fuller understanding of the nature and objects of the present invention will become apparent upon consideration of the following detailed description taken in connection with the accompanying drawings, wherein:

Fig. 1 is a perspective view of a car seat with a cushioning device embodying the invention;

Fig. 2 is a perspective view of the car seat of Fig. 1 with a child secured therein;

Fig. 3 is a plan view of the cushioning device of Fig. 1 with the arms in the open or unfolded position;

Fig. 4 is a view of the cushioning device of Fig. 3 with the arms shown in the closed or folded position; and

Fig. 5 is a side view of Fig. 4.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now to the drawings, particularly Figs. 1 and 2, there is shown a car seat 10 having a cushioning device 12 embodying the present invention attached thereto. Car seat 10 has a seat portion 14; a back portion 16; side rests 18,20; side arms 22,24; and a harness assembly 26.

As best shown in Fig. 2, harness assembly 26 is configured to restrain a child in seat 10 and cushioning device 12 protects the exposed skin areas from irritation. Harness assembly 26 includes a pair of shoulder belts or straps 28,30 that are anchored to a frame (not shown) of car seat 10. Straps 28,30 are threaded through a pair of grommets or bushings 32,34, respectively, in seat back 16. The straps 28,30 extend forwardly and downwardly over the shoulders and chest of a child in car seat 10. The free ends of straps 28,30 are secured to a tongue assembly 36 having a tongue 38 that is configured to lock with a buckle 40 which is attached to one end of a crotch strap 42. The other end of crotch strap 42 is attached to the frame of car seat 10. Buckle 40 is provided with a button 44 which, when pushed, unlocks tongue 38 and releases

tongue assembly 36.

As best shown in Figs. 3-5, cushioning device 12 is formed from a single piece of soft material 52, for example, a piece of fleece having a flannel lining 54 (Fig. 5). A substantially T-shaped section 58 is cut out of fleece 52 to form a main body 46 and a pair of arms 48, 50 that depend from opposite side edges of the main body in substantially parallel relationship to one another. Flannel lining 54 is cut in a matching configuration and secured to fleece 52 by sewing, for example. Each arms 48 and 50 is provided with a fastener 56, for example, a zipper or a Velcro fastener or snaps, that is secured to opposite side edges thereof. When zipper 56 is closed, as shown in Figs. 1, 2 and 4, arms 48 and 50 form tubular members that are sized to fit about straps 28 and 30, respectively. As shown in Fig. 2, arms 48 and 50 are sufficiently long so that they extend over the child's shoulder. Typically, arms 48 and 50 are approximately 6 inches long and 6 inches wide when unfolded. Main body 46, which forms a pillow or cushion against which a child's head rests when the child is secured in seat 10, is approximately 8 inches wide and 5 inches high. If desired, pillow 46 is formed with an internal chamber or pocket 58 that is filled with a polyester foam 60 or other suitable cushion material. Chamber 58 is closed by sewing or by using some other closure means such as a zipper, a Velcro fastener or snaps. In the illustrated embodiment, chamber 58 is accessible through an opening 62 that is closed with a fastening element 64, for example a zipper or a Velcro fastener.

-6-

In securing cushioning device 12 to car seat 10, the cushioning device is positioned on the car seat on top of straps 28,30. Arms 48 and 50 are folded around straps 28,30, respectively, and zippers 56 are closed so that the arms are secured about the straps. As shown in Fig. 2, arms 48 and 50 are positioned on either side of the child's neck and prevent straps 28,30 from rubbing against the child's neck. In addition, arms 48 and 50 of cushioning device 12 prevent straps 28,30 from rubbing against the child's cheeks. The child's head rests against pillow 46 and the fleece protects the child's head from rubbing against the seat back 16 and bushings 32,34. It will be readily appreciated that cushioning device 12, when installed, is constrained for limited movement relative to straps 28,30. The ends of the arms 48,50 limit forward or downward movement and the top edge of pillow 46 limit backward or upward movement.

In order to place a child in seat 10 having cushioning device 12, button 44 is pressed, tongue 38 is unlocked and tongue assembly 36 is released from buckle 44. Tongue assembly 34 is lifted out of the way to allow positioning of the baby in car seat 10. Once the child is in position, tongue 38 is locked into buckle 44. Arms 48 and 50 are positioned on opposite sides of the child's neck and pillow 56 is located behind the child's head. In this way, the child is secured in car seat 10, and the child's neck and head are protected by cushioning device 12 against irritations caused by rubbing against straps 28,30, seat back 16 and bushings 32,34.

-7-

Since certain changes may be made in the foregoing disclosure without departing from the scope of the invention herein involved, it is intended that all matter contained in the above description and depicted in the accompanying drawings be construed in an illustrative and not in a limiting sense.

What is claimed is:

1. A cushioning device for use with a car seat having a seat, a back and a pair of shoulder straps, said device comprising:

- (a) a soft piece of material having a main body, a pair of arms extending from said main body; and
- (b) fastening means on opposite side edges of each said arm for forming a pair of protective members, each said protective member sized and shaped to fit about one of the shoulder straps, when said protective members are fitted about the straps, said main body is positioned on the back of the car seat to protect the head of a child that is restrained in the car seat, said protective members protecting the child's neck against irritation.

2. The cushioning device as claimed in claim 1 wherein said fastening means is a zipper.

3. The cushioning device as claimed in claim 1 wherein said fastening means is a Velcro fastener.

4. The cushioning device as claimed in claim 1 wherein said soft material is fleece.

5. The cushioning device as claimed in claim 1 wherein said soft material is fleece with a flannel

lining.

6. A cushioning device for use with a shoulder strap assembly that is used to restrain a child in a car seat, said device comprising:

- (a) a soft material having a main body and at least one extending arm;
- (b) fastening means disposed along the side edges of said arm for securing said cushioning device about a shoulder strap, said arm forming a tubular member when said fastening means is closed, said tubular member sized and shaped to fit around the shoulder strap, said cushioning device constrained for limited movement relative to the strap when said fastening means is closed when said arm is fitted about the shoulder strap, said tubular member is positioned to protect a child's neck and said main body is positioned to protect the child's head.

7. The cushioning device as claimed in claim 6 wherein said fastening means is a zipper.

8. The cushioning device as claimed in claim 6 wherein said fastening means is a Velcro fastener.

9. The cushioning device as claimed in claim 6 wherein said soft material is fleece.

10. The cushioning device as claimed in claim 1

wherein said soft material is fleece with a flannel lining.

11. A cushioning device for use with a child's car seat, the car seat having a seat, a back and a pair of shoulder straps for restraining a child in the car seat, said device comprising:

- (a) a soft piece of material that is formed with a somewhat T-shaped section, said material having a main body that defines a pillow and a pair of extending arms that define shoulder strap covers, said T-section forming inner edges of said arms and a portion of a bottom edge of said pillow;
- (b) fastening means on opposed side edges of each said arm for holding said side edges together to form a tubular member, each said tubular member is sized and shaped to fit around a a shoulder strap, said cushioning device constrained for limited movement relative to the strap when said tubular member is fitted around the strap when said arms are fitted around the straps, said main body is positioned against the back of the car seat to protect a child's head and said tubular members are positioned to protect the child's neck.

12. The cushioning device as claimed in claim 11 wherein said main body is a pillow cushion for a child's head when the child is restrained the car seat

and wherein said arms are sufficiently long to fit over the shoulders of a child in the car seat.

13. The cushioning device as claimed in claim 11 wherein said soft material is fleece.

14. The cushioning device as claimed in claim 11 wherein said soft material is fleece with a flannel lining.

15. The cushioning device as claimed in claim 11 wherein said main body has a pocket for receiving a cushion material.

16. The cushioning device as claimed in claim 15 wherein said pocket is filled with a cushion material.

17. The cushioning device as claimed in claim 16 wherein said cushion material is a polyester foam.

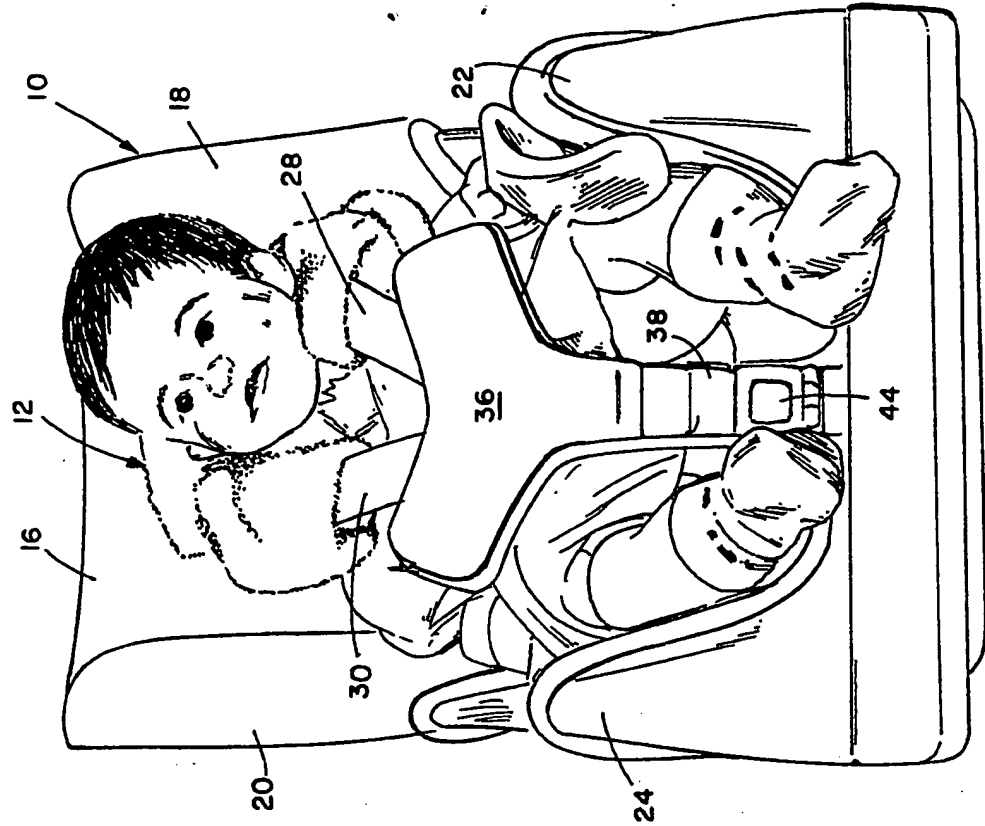


FIG. 2

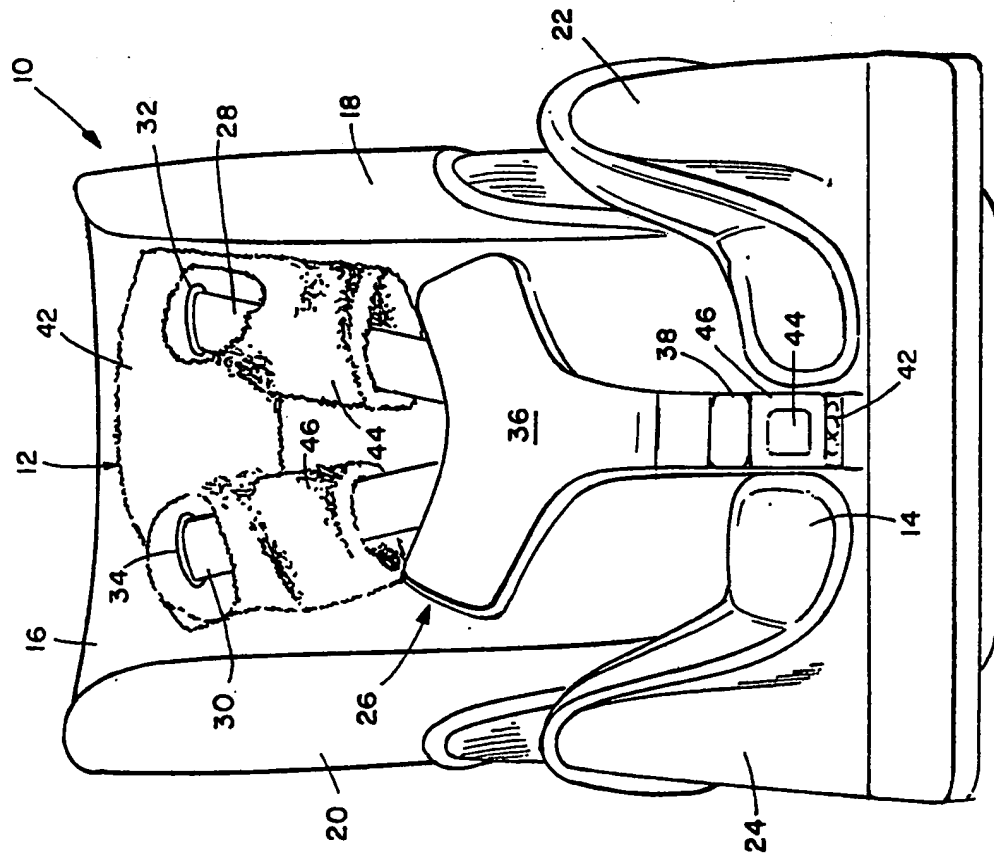


FIG. 1

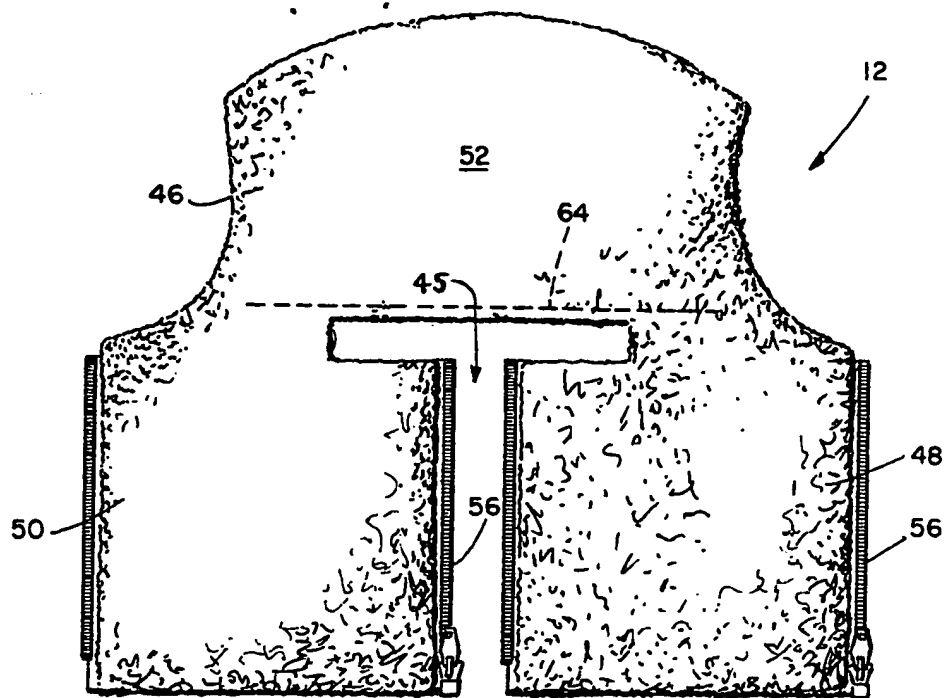


FIG. 3

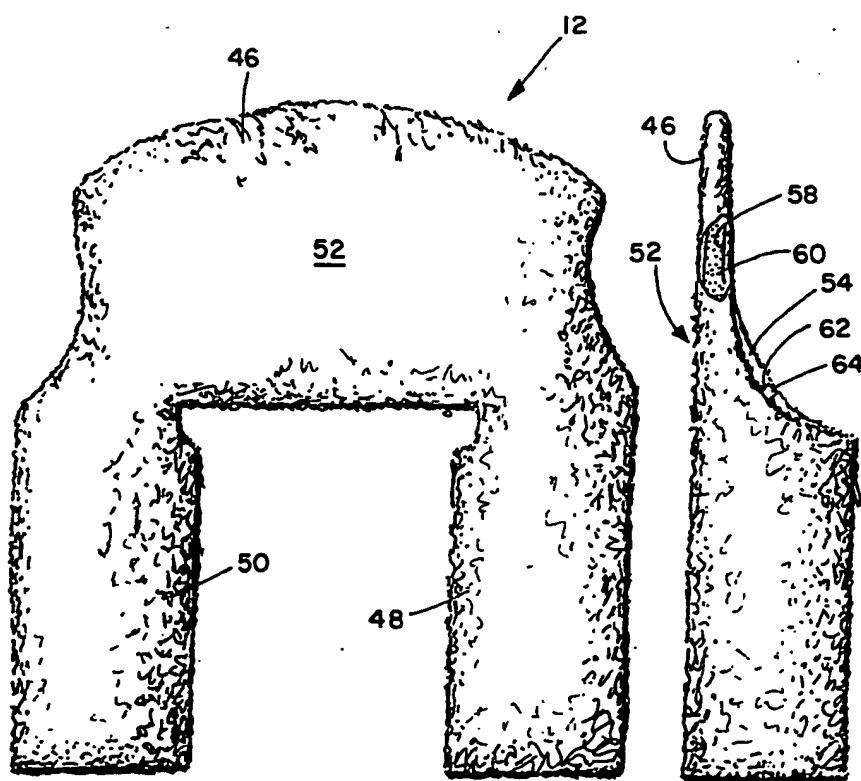


FIG. 4

FIG. 5

INTERNATIONAL SEARCH REPORT

International Application No. PCT/US91/01238

I. CLASSIFICATION OF SUBJECT MATTER (if several classification symbols apply, indicate all) *		
According to International Patent Classification (IPC) or to both National Classification and IPC		
IPC(5): B60R 22/10 U.S. CL. 297/397,482		
II. FIELDS SEARCHED		
Minimum Documentation Searched *		
Classification System	Classification Symbols	
U.S.	297/391,393,397,482,484	
Documentation Searched other than Minimum Documentation to the extent that such Documents are included in the Fields Searched *		
III. DOCUMENTS CONSIDERED TO BE RELEVANT 1*		
Category *	Citation of Document, 1* with indication, where appropriate, of the relevant passages 1*	Relevant to Claim No. 1*
X Y	US, A, 4,838,611 (TALAUGON) 13 JUNE 1989 See figures 1,2.	1,3,6,8,11,12, 15-17 2,4,5,7,9,10, 10,13,14
A	US, A, 4,097,086 (HUDSON) 27 JUNE 1978	1,6
A	US, A, 4,619,468 (SPILL) 28 OCTOBER 1986	1,3-6,8-10
A	US, A, 4,738,488 (CAMELIO) 19 APRIL 1988	1,6
A	US, A, 4,779,930 (ROSEN) 25 OCTOBER 1988	1,6
<p>* Special categories of cited documents: 13</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> <p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</p> <p>"A" document member of the same patent family</p>		
IV. CERTIFICATION		
Date of the Actual Completion of the International Search *	Date of Mailing of this International Search Report *	
16 APRIL 1991	13 MAY 1991	
International Searching Authority *	Signature of Authorized Officer **	
ISA/US	PETER BROWN	